| Ref<br># | Hits | Search Query  | DBs                                  | Default<br>Operator | Plurals | Time Stamp       |
|----------|------|---|--------------------------------------|---------------------|---------|------------------|
| L17      | 1    | ("5959307").PN.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR                  | OFF     | 2005/05/25 08:47 |
| L18      | 333  | "372".clas. and ((impurity or<br>diffus\$3) near3 ((block\$3 or<br>suppres\$4 or prevent\$3) near3<br>layer)) | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR                  | ON      | 2005/05/25 08:50 |
| L19      | 45   | L18 and (gan or algan or gaaln)   | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR                  | ON      | 2005/05/25 08:51 |
| L20      | 249  | "372".clas. and (diffus\$3 near3<br>(block\$3 or prevent\$3) near3 (layer<br>or region))                      | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR                  | ON      | 2005/05/25 08:52 |
| L21      | 16   | "372".clas. and ("diffusion blocking layer")  | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR                  | ON      | 2005/05/25 08:52 |
| L22      | 160  | "372".clas. and (diffusion near3 (block\$3 or prevent\$3) near3 layer)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR                  | ON      | 2005/05/25 08:52 |
| L23      | 144  | L22 not L21   | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR                  | ON      | 2005/05/25 08:52 |
| L24      | 16   | L23 and gan   | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR                  | ON      | 2005/05/25 08:52 |
| L25      | 233  | L20 not L24   | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR                  | ON      | 2005/05/25 08:52 |
| L26      | 66   | L25 and (nitr\$4 or gan or algan or gaaln)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR .                | ON      | 2005/05/25 08:52 |
| L27      | 56   | 372/46.ccls. and ((gan or algan or gaaln) with block\$3)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR                  | ON      | 2005/05/25 08:52 |
| L28      | 27   | L19 not (L27 or L26)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR                  | ON      | 2005/05/25 08:52 |

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|------------|-------------|---|--------------------------------------|------|-----|-------------------|
| S1         | 1           | ("5345463") <sub>.</sub> PN.                                      | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR   | OFF | 2005/05/23 16:38  |
| S2         | 11752       | 372/43,44,45,46.ccls.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR . | ON  | 2005/05/23 16:39  |
| <b>S</b> 3 | 0           | S2 and ((dop\$4 or concentration or impurit\$3) with "cm.sup3")   | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR   | ON  | 2005/05/23 17:03  |
| S4         | 1           | ("20040179563").PN.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR   | OFF | 2005/05/23 16:42  |
| S6         | 0           | S2 and ((dop\$4 or concentration or impurit\$3) with ("cm.sup3")) | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR   | ON  | 2005/05/23 16:51  |
| S7         | 585         | S2 and (mg or magnessium)   | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR   | ON  | 2005/05/23 16:51  |
| S8         | 563         | S7 and (dop\$4 or concentration or impurit\$3)                    | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR   | ON  | 2005/05/23 16:59  |
| S9         | 256         | S8 and "GaN"  | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR   | ON  | 2005/05/23 17:00  |
| S10        | 27          | S2 and ((dop\$4 or concentration or impurit\$3) with cm?3)        | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR   | ON  | 2005/05/23 17:04  |
| S11        | 276         | S2 and ((dop\$4 or concentration or impurit\$3) with cm\$3)       | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR   | ON  | 2005/05/23 17:06  |
| S12        | 11752       | 372/43,44,45,46.ccls.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR   | ON  | 2005/05/23 17:07  |
| S13        | 11759       | 372/43,44,45,46.ccls.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR   | ON  | .2005/05/24 08:05 |

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|-----|-------------|--|---|------|-----|------------------|
| S14 | 572         | S13 and GaN  | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO                  | OR   | ON  | 2005/05/24 08:06 |
| S15 | 585         | S13 and (mg or magnessium)   | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO                  | OR   | ON  | 2005/05/24 08:06 |
| S16 | 563         | S15 and (dop\$4 or concentration or impurit\$3)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO                  | OR   | ON  | 2005/05/24 08:06 |
| S17 | 256         | S16 and "GaN"  | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO                  | OR   | ON  | 2005/05/24 08:06 |
| S18 | 316         | S14 not S17  | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO                  | OR · | ON  | 2005/05/24 09:21 |
| S19 | 0           | ("JP11-251687").PN.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO                  | OR   | OFF | 2005/05/24 09:23 |
| S26 | 2           | ("3408413").PN.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO                  | OR   | OFF | 2005/05/24 09:25 |
| S29 | 0           | ("JP11251687A").PN.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR   | OFF | 2005/05/24 09:52 |
| S30 | 2           | ("11251687").PN.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR   | OFF | 2005/05/24 11:01 |
| S31 | 314         | S14 and ("tunnel barrier" or confinement or "diffusion adj blocking" or ((stress or crack) adj preventi\$3)) | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO                  | OR   | ON  | 2005/05/24 11:03 |
| S32 | 16          | "372".clas. and ("diffusion blocking layer")   | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO                  | OR   | ON  | 2005/05/24 12:05 |
| S33 | 160         | "372".clas. and (diffusion near3 (block\$3 or prevent\$3) near3 layer)                                       | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO                  | OR   | ON  | 2005/05/24 16:26 |

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|-----|------|--|--------------------------------------|------|-------------|------------------|
| S34 | 144  | S33 not S32  | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR   | ON          | 2005/05/24 12:06 |
| S35 | 16   | S34 and gan  | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR   | ON .        | 2005/05/24 12:07 |
| S36 | 4    | ("20030173573"   "5042043"  <br>"6069021"   "6194744").PN.                         | US-PGPUB;<br>USPAT;<br>USOCR         | OR   | ON          | 2005/05/24 15:52 |
| S37 | 249  | "372".clas. and (diffus\$3 near3 (block\$3 or prevent\$3) near3 (layer or region)) | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR   | ON          | 2005/05/24 16:27 |
| S38 | 16   | "372".clas. and ("diffusion blocking layer")                                       | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR   | ON          | 2005/05/24 16:28 |
| S39 | 160  | "372".clas. and (diffusion near3 (block\$3 or prevent\$3) near3 layer)             | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR   | ON          | 2005/05/24 16:28 |
| S40 | 144  | S39 not S38  | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR   | ON          | 2005/05/24 16:28 |
| S41 | 16   | S40 and gan  | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR   | ON          | 2005/05/24 16:28 |
| S42 | 233  | S37 not S41  | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR   | ON          | 2005/05/24 16:28 |
| S44 | 66   | S42 and (nitr\$4 or gan or algan or gaaln)   | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR   | ON          | 2005/05/24 17:02 |
| S45 | 1190 | 372/46.ccls. and (block\$3 near2 (layer or region))                                | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR   | ON          | 2005/05/24 17:03 |
| S46 | 117  | S45 and (gan or algan or gaaln)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR   | ON          | 2005/05/24 17:03 |
| S47 | 55   | S46 and ((gan or algan or gaaln) with block\$3)                                    | US-PGPUB;<br>USPAT;<br>USOCR;<br>JPO | OR . | ON          | 2005/05/24 17:06 |